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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,286	11/30/2000	Wilson Tam	821937600001	3307

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EXAMINER

PHAN, MAN U

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/726,286

Applicant(s)

TAM ET AL.

Examiner

Man Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4, 5</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The application of Tam et al. for an "Unified distributed architecture for a multi-point video conference and interactive broadcast systems" filed 11/38/2000 has been examined.

Claims 1-12 are pending in the application.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 6-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biggs et al. (US#5,625,407) in view of Bhola et al. (US#6,321,252).

With respect to claims 1 and 2, both Biggs et al. (US#5,625,407) and Bhola et al. (US#6,321,252) disclose a novel method and system for multipoint video conference controlling, according to the essential features of the claims. Biggs discloses in Fig. 1 a block diagram illustrated the system architecture of a multimedia conferencing system which includes a multimedia server (MMS) 102, a plurality of endpoint devices 104, 106(*participants*), and a

communications network 108. Multimedia server (MMS) 102 provides for the communication of multimedia information among a plurality of endpoint devices 104, 106. The MMS 102 is connected to a plurality of endpoint devices 104, 106 via network 108 over communications link 122. The MMS 102 includes an MMS processor 126 connected to an MMS memory 128. MMS processor 126 controls the operation of an MMS data transceiver 130, an MMS communications link establishment device 132, and a multimedia signal routing device 129. Communications link establishment device 132 may be a conventional network interface device of a type well-known to those skilled in the art, such as TI, PRI, BRI, LAN, etc. MMS data transceiver 130 is frequently integrated with the network interface hardware, and MMS processor 126 may be a conventional microprocessor device. Communications link 122 could be a plurality of standard wire-pair telephonic links, and MMS memory 128 could be a combination of conventional ROM and RAM. Multimedia signal routing device 129 provides for the selective routing of video, audio, and/or data to and from a plurality of endpoint devices via network 108, thereby providing a multimedia conference, and multimedia signals are exchanged among a plurality of endpoint devices (See also Fig. 7; Col. 4, lines 52 plus).

However, Biggs does not disclose expressly the reflector for passing an audio/video signal, and the receiving login program data for a VC session. In the same field of endeavor, Bhola et al. (US#6,321,252) discloses in Fig. 1 a block diagram illustrated a multimedia distributed groupware system including a local client site 100, one or more remote client sites 170, a server 120, and a reflector 180, all connected using a network 113. The reflector 180 is a logical server that receives one or more media streams, from one or more clients, and multicasts them to all clients. The network is used to communicate messages between the clients and the

server using a network specific protocol. As an example, when the Internet is used as the network, the TCP/IP protocol is used for communication. As depicted, the reflector 180 manages the distribution of audio and video streams to the various clients 100, 170 in the network 113. Clients 100, 170 may join an ongoing collaboration at any point in the session. The reflector 180 maintains a circular buffer 181 of the most recent several seconds in the session and an open TCP connection for each client 100, 170 (See also Fig. 10; Col. 4, lines 7 plus). The use of so-called "reflector" technology is well known method in the art for increasing scalability for real-time multimedia streaming is through. The reflector technology is used in applications--such as IBM's BAMBA.<sup>TM</sup>., Vosaic's MEDIASERVER.<sup>TM</sup>. and White Pine Software's CU-SeeMe.<sup>TM</sup>.--to provide real-time audio and video streaming over the Internet. Reflectors are servers that manage the distribution of audio and video streams to their receivers. They can be cascaded and scaled to handle increased demand for a broadcast. Multimedia streams are replicated at each reflector and delivered to multiple receivers. By simply adding more reflectors, a broadcast is capable of supporting large numbers of clients.

Regarding claims 6-7 and 10, they are method claims corresponding to the apparatus claims 1 and 2 above. Therefore, claims 6-7, 10 are analyzed and rejected as previously discussed with respect to claims 1-2.

One skilled in the art would have recognized the need for effectively and efficiently administering the video conference and controlling the A/V signal flow, and would have applied Bhola's teaching of the reflector server in manages the distribution of audio and video streams to the various clients in the network into Biggs' novel use of the multipoint video conference and

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broadcasting system utilizing multipoint control unit and improved end point devices. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Bhola's system and method for data streaming and synchronization in multimedia groupware applications into Biggs's seamless multimedia conferencing system using an enhanced multipoint control unit and enhanced endpoint devices with the motivation being to provide a method and system for conducting a video conference or broadcast over a distributed network in which audio and video signals generated by one or more participants in the video communication session.

4. Claims 3-5 and 8, 9, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biggs et al. (US#5,625,407) in view of Bhola et al. (US#6,321,252) as applied to the claims above, and further in view of Kenner et al. (US#6,421,726).

With respect to claims 3-5, these claims differ from the claims above in that the claims require the client program includes an audio/visual viewer with a codec configured to display the audio/visual signal received from the reflector. In the same field of endeavor, Kenner et al. (US#6,421,726) discloses a system and method whereby a user can acquire network performance information for a dynamic and distributed multipurpose network, and use this information to identify and select optimum delivery sites or servers from which to receive computer data, specifically multimedia content, as well as to select the particular type of multimedia content viewable by the user. Such delivery sites, servers, and content type are selected so as to increase network capacity, distribute server load, reduce transmission delays between the server and the user, and reduce obstacles to viewing the multimedia content. Fig. 1 illustrated a network

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topology of a system, in which the user terminal includes the uses of a configuration utility 34 and a client program 36, and the browser 38 with installed CODECs 110-114. The video player "CODEC" program, or COmpressor/DECompressor, often located at a user's multimedia terminal for decompression of a video. Generally speaking, a single CODEC program can only recognize and decompress a single compression format (Col. 8, lines 18 plus and Col. 18, lines 14 plus).

Regarding claims 8-9 and 11-12, they are method claims corresponding to the apparatus claims 3-5 above. Therefore, claims 8-9, 11-12 are analyzed and rejected as previously discussed with respect to claims 3-5.

One skilled in the art would have recognized the need for effectively and efficiently administering the video conference and controlling the A/V signal flow, and would have applied Kenner's novel use of CODEC programs at the user terminal for displaying audio/visual viewer, and Bhola's teaching of the reflector server in manages the distribution of audio and video streams to the various clients in the network into Biggs' multipoint video conference and broadcasting system utilizing multipoint control unit and improved end point devices. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Kenner's system and method for selection and retrieval of diverse types of video data on a computer network, and Bhola's system and method for data streaming and synchronization in multimedia groupware applications into Biggs' seamless multimedia conferencing system using an enhanced multipoint control unit and enhanced endpoint devices with the motivation being to provide a method and system for conducting a video conference or

broadcast over a distributed network in which audio and video signals generated by one or more participants in the video communication session.

5. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhola et al. (US#6,321,252) in view of Kenner et al. (US#6,421,726).

With respect to claims 13-18, both Bhola et al. (US#6,321,252) and Kenner et al. (US#6,421,726) disclose a novel method and system for multipoint video conference controlling, according to the essential features of the claims. Bhola et al. (US#6,321,252) discloses in Fig. 1 a block diagram illustrated a multimedia distributed groupware system including a local client site 100, one or more remote client sites 170, a server 120, and a reflector 180, all connected using a network 113. As depicted in Fig. 1, the server 120, which can be either a client machine running the server or a dedicated server machine, maintains a set of stream objects 160, one for each event stream (described in more detail with reference to Fig. 4). Each stream object 160 includes the following: an event buffer 161 to store events which are used to initialize a late comer in a collaboration; an event sequence generator 162 to generate sequence numbers for the events in the event stream; a list of registered clients 163 collaborating using the specific event stream; and, an event distributor 164 which is responsible for distributing events to the registered clients (Col. 5, lines 24 plus). Bhola further teaches in Fig. 3 a block diagram and flow chart illustrated the structure of an event stream, and Figs. 5-8 illustrated the flow charts for posting, distribution and handling of events. Each event has a type, a source, a time stamp, and data. A data component can receive an event from an event stream by creating an event stream or by joining a named event stream 220 and then subscribing to the events in the stream by adding



itself in the list of sinks 320 maintained for that event stream. Depending on how a data component 108 interacts with its streams 220, a shared component can be classified to be a source component 331, 332 which generates and posts events to a stream, or a sink component 341, 342 which consumes events from a stream, or both. For example, a chat component can be both source 331, 332 and sink 341, 342 for a text event stream. The event stream stores the time-stamped events in an event queue 310 (described in detail in Fig. 4) until it is the time to notify the synchronous sinks 341. The event stream receives clock ticks at regular intervals from a sink-clock object 260 (which may be a coordinator object 210). The event stream uses an event dispatcher 350 having its own separate thread for sending events to both synchronous and asynchronous sinks (Col. 7, lines 19 plus).

However, Bhola does not disclose expressly the step of generating a digital ticket for each of the participants includes a reference time, data and controller . In the same field of endeavor, Kenner et al. (US#6,421,726) discloses the configuration utility 34 and the client program 36 on the user terminal 12 as shown in Fig. 1. The configuration utility 34, when first run on the user terminal 12, retrieves a delivery site file (step 40) from the MSP 32 (Fig. 1). If the user already has a delivery site file (e.g., it was received with the configuration utility 34), and that delivery site file is sufficiently new, the delivery site file can be retrieved from the local hard disk of the user terminal 12. This delivery site file contains a list of all available delivery sites (such as delivery sites 26, 28, and 30) and a list of network tests to be run at the user terminal 12. In the context of the invention, there can be as few as two delivery sites, or if the number of users justifies it, as many as several thousand. The number of sites in principal is unlimited, with each available delivery site represented in the delivery site file. The delivery site

file is generated by the database from within the MSP's computer system. The database application uses information about the user to dynamically determine the optimum tests to run. Consequently, the delivery site file need not contain entries for every delivery site in existence; the list can be tailored to include only those sites which appear appropriate or feasible (Col. 9, lines 40 plus). Kenner further teaches in Fig. 1 illustrated a network topology of a system, in which the user terminal includes the uses of a configuration utility 34 and a client program 36, and the browser 38 with installed CODECs 110-114. The video player "CODEC" program, or Compressor/DECompressor, often located at a user's multimedia terminal for decompression of a video. Generally speaking, a single CODEC program can only recognize and decompress a single compression format (Col. 8, lines 18 plus and Col. 18, lines 14 plus).

One skilled in the art would have recognized the need for effectively and efficiently administering the video conference and controlling the A/V signal flow, and would have applied Kenner's novel use of CODEC programs at the user terminal for displaying audio/visual viewer into Bhola's teaching of the reflector server in manages the distribution of audio and video streams to the various clients in the network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Kenner's system and method for selection and retrieval of diverse types of video data on a computer network into Bhola's system and method for data streaming and synchronization in multimedia groupware applications with the motivation being to provide a method and system for conducting a video conference or broadcast over a distributed network in which audio and video signals generated by one or more participants in the video communication session.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Fukuoka et al. (US#5,914,940) is cited to show the multipoint video conference controlling method and system capable of synchronizing video and audio packets.

The Lovell et al. (US#6,633,570) is cited to show the efficient transmission of data to multiple network nodes.

The Goldszmidt et al. (US#6,195,680) is cited to show the client-based dynamic switching of streaming servers for fault-tolerance and load balancing.

The Biggs et al. (US#5,673,080) is cited to show the seamless multimedia conferencing system using enhanced endpoint devices.

The Roy (US#6,324,169) is cited to show multimedia conferencing services over a wide area network interconnecting nonguaranteed quality of service LANs.

The Roy (US#6,600,725) is cited to show the apparatus and method for providing multimedia conferencing services with selective information services.

The Srinivasan (US#5,991,812) is cited to show the methods and apparatus for fair queuing over a network.

The Jang et al. (US#6,442,758) is cited to show the multimedia conferencing system having a central processing hub for processing video and audio data for remote users.

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The Kenner et al. (US#6,502,125) is cited to show the system and method for optimized storage and retrieval of data on a distributed computer network.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149.

The examiner can normally be reached on Mon - Fri from 6:30 to 3:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3149.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

**8. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:** (703) 305-9051, (for formal communications intended for entry)

**Or:** (703) 305-3988 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

08/31/2004.

MAN PHAN  
PATENT EXAMINER

Man 4. Phan